

Surf Res

What is claimed is:

1. An ink jet recording sheet comprising a non-water absorptive support having thereon an ink absorptive layer comprising polyvinyl alcohol, a cationic polymer, and a compound containing a zirconium or aluminum atom other than zirconium oxide and aluminum oxide, wherein a surface pH of said ink absorptive layer is 4 to 6 measured 30 minutes after receiving a water based ink of pH range 6 to 9 jetted from an ink jet printer in an amount of 20 ml/m².
2. The ink jet recording sheet of claim 1, wherein an average molecular weight of the cationic polymer is between 5,000 and 100,000.
3. The ink jet recording sheet of claim 1, wherein the compound containing a zirconium atom is selected from the group consisting of zirconyl carbonate, ammonium zirconyl carbonate, zirconyl acetate, zirconyl nitrate, zirconium oxychloride, zirconium lactate, and zirconyl citrate.
4. The ink jet recording sheet of claim 1, wherein the compound containing an aluminum atom is selected from the

1000155173 1 PCT/00/1

group consisting of aluminum chloride, basic aluminum chloride, aluminum sulfate, basic aluminum sulfate, and basic aluminum sulfate silicate.

5. The ink jet recording sheet of claim 1, wherein the surface pH of said ink absorptive layer is 4.5 to 5.5 measured 30 minutes after receiving a water based ink of pH range 6 to 9 jetted from an ink jet printer in an amount of 20 ml/m².

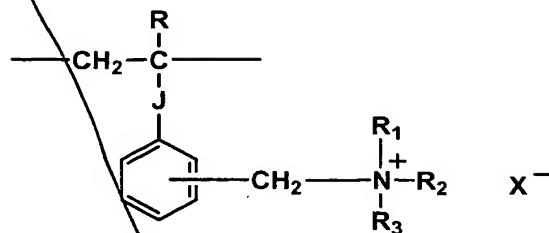
6. The ink jet recording sheet of claim 1, wherein the ink absorptive layer is a porous layer.

7. The ink jet recording sheet of claim 1, wherein said ink absorptive layer comprises boric acid or a salt thereof in an amount of 2 to 30 millimol per m² of said ink absorptive layer, and a surface pH of said ink absorptive layer prior to receiving ink is from 3.5 to 5.5.

8. The ink jet recording sheet of claim 1, wherein said cationic polymer is represented by Formula (1),

TOP SECRET//
REF ID: A65807

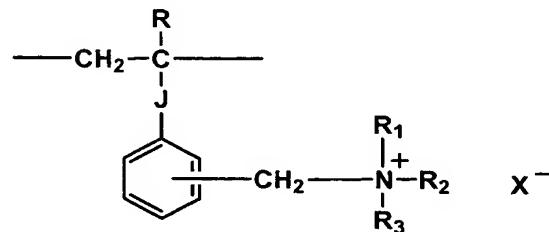
Formula (1),



wherein R represents a hydrogen atom or an alkyl group; R₁, R₂, and R₃ each represent an alkyl group or a benzyl group; J represents a bond or a divalent organic group; X⁻ represents an anion group.

9. The ink jet recording sheet of claim 1, wherein said ink absorptive layer comprises at least two ink absorptive layers, wherein said cationic polymer in said ink absorptive layer farthest from said non-water absorptive support comprises a repeating unit represented by Formula (1),

Formula (1),



wherein R represents a hydrogen atom or an alkyl group; R₁, R₂, and R₃ each represent an alkyl group or a benzyl group; J

10015697-121001

represents a bond or a divalent organic group; X^- represents an anion group.